

Sequence VH O&H Meeting
September 3rd, 2025 at 3PM EST via MS Teams

Attendees: Dan Engstrom, Al Lopez, Bob Campbell, Joe Anthony, Ben Maddock, Mike Deegan

Overview:

1. Operation
 2. Fuel
-

Notes:

1. Operation - Engine swap experiment:

- i. Labs A & G swapped engines and fuel dilution moved with the build
 - ii. Lab A reported higher fuel dilution and Lab G reported lower fuel dilution
 - iii. Lab G swapped intake manifold and fuel injectors on Lab A's engine and maintained low fuel dilution
 - iv. Labs A & G are planning to swap assembled cylinder heads to rule out the top end of the engine
- b. Notes:
- i. Intake manifold swap included injectors
 1. Spray pattern and flow test were deemed acceptable at both Lab A & G
 - ii. Base timing passed standard checks with timing dots
 - iii. Heads were removed
 1. Cams were the same part number
 2. Different head gasket part number (superseded part # from Lab A)
 - a. Coolant orifice size was identical, base number was the same
 3. Both labs stop running heads at 10 runs due to valve sealing and oil consumption concerns
 - iv. ACTION: Compressed head gasket thickness to be measured and compared
- c. Schedule
- i. Both labs run another 48h of head swap operation
 1. Re-use head gaskets
 - ii. Review data on Tuesday, 9/9 at 3:30PM EST
- d. Future topics to address depending on the outcome:
- i. Mechanical timing checked with dial indicators
 - ii. Bore measurements and surface finish checks
 - iii. Verifying no batch differences despite identical purchase date (pistons, rings, cams, etc)

2. Fuel – Matrix on hold until Engine Swap experiment is resolved

M-000054-3 Fuel Approval Matrix

A1	A2	G1	G2	D
940 (175651)	931 (193861)	940 (175644)	1011-1 (191485)	931 (190601)
931 (193862)	1011-1 (193857)	1011-1 (199200)	931 (191483)	1011-1 (190602)
1011-1	931	931	1011-1	931

- M-000054 Fuel Batch Approval
 - o M-000054 batch was too mild with two 940 results
 - https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250130ConferenceCall_draft.pdf
 - o M-000054-1 pilot batch was too severe with two 940 results
 - <https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250409ConferenceCall.pdf>
 - o M-000054-2 was too severe with a 931 and 1011-1 result
 - <https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250520ConferenceCall.pdf>
 - o M-000054-2a fuel dilution study
 - <https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250616%20ConferenceCall.pdf>
 - o M-000054-3 pilot batch row 1
 - 20250714 meeting
 - o M-000054-3 big batch row 2
 - 20250819 meeting

Intertek <small>Total Quality Assured.</small>			Oil	AES	Yi	RCS	Yi	AEV	Yi	APV	Yi	OSCR	FD AVG	Oil Add
Pilot Blend Test	G	1011-1		8.71	0.491	9.42	-0.08	9.47	0.19	9.08	0.25	2	15.90	793
	D	931		7.92	-0.133	9.13	-0.643	8.7	-0.9	7.94	-0.683	80	15.60	925
	A	931		8.84	1.4	9.38	-1.236	9.04	0.233	8.12	-0.383	1	12.10	730
Final Blend	D	1011-1		8.75	0.561	9.46	-0.451	9.43	0	8.64	-0.667	6	16.40	
	G	1011-1		8.3	-0.228	9.4	0.097	9.68	1.19	9.24	0.583	2	16.69	500
	A	931		9.12	1.87	9.3	-1.02	9.02	0.17	8.22	-0.22	1	12.30	
	A	1011-1		9.47	1.82	9.6	-2.01	9.52	0.43	8.96	0.42	1	13.00	
	G	931		7.87	-0.217	8.86	-0.17	8.9	-0.233	7.64	-1.183	65	16.86	940
				avg	0.6955		-0.68913		0.135		-0.23538			